

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior version, and listing, of claims in the application:

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1. (Currently amended) A method for providing integrated genomic services comprising:

(a) receiving a first request from a customer, wherein said request comprises a first nucleic acid sequence[[,]] and an order for at least one [[two]] genomics product [[products]],

10 wherein said request comprises a website customer interface that comprises a field for a customer identification number, a field for said first nucleic acid sequence and a field for said at least one genomics product; and

(b) utilizing said nucleic acid sequence to provide said at least one [[two]] genomics product [[services or products]].

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2. (Currently amended) The method according to Claim 1 further comprising:

(c) storing a first genomic product report for [[each of]] said at least [[two]] one genomics [[products]] product in a customer report database, wherein said first genomic product report contains searchable genomic product data.

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3. (Currently amended) The method according to Claim 2 further comprising:

(d) receiving a second request from said customer, [[;]] wherein said second request comprises a second order for at least one genomics product [[,]] and a second nucleic acid sequence;

(e) comparing said second order and/or said second nucleic acid sequence against said [[genomic]] genomics product report to determine if said second request or nucleic acid sequence is redundant.

5 4. (Currently amended) The method according to Claim 1[[, 2 or 3]] wherein said at least one [[genomic]] genomics product is selected from the group consisting of a nucleic acid clone, a genotypically modified cell, and a transgenic genotypically modified animal.

10 5. (Withdrawn) The method according to Claim 4, wherein said genotypically modified cell line comprises a plurality of cell lines, wherein at least two of said cell lines have a different genotypic modification.

6. (Original) The method according to Claim 4, wherein said nucleic acid clone comprises a plurality of clones representing at least a subset of a gene family.

15 7. (Currently amended) The method according to Claim 4, wherein said at least one [[genomic]] genomics product is made by a recombinase mediated process.

20 8. (Currently amended) The method according to Claim 7, wherein said recombinase mediated process is selected from the group consisting of:

25 (i) cloning a nucleic acid by contacting a nucleic acid library with first and second substantially complementary single-stranded targeting polynucleotides and a recombinase, wherein said first single-stranded targeting polynucleotide is complementary to a sequence that has at least about 70% sequence identity as compared to the second single-stranded targeting polynucleotide, wherein said first single-stranded targeting polynucleotide comprises said first

nucleic acid sequence or a homologue thereof, wherein said homologue has at least about 70% sequence identity as compared to said first single-stranded targeting polynucleotide, and isolating said nucleic acid;

(ii) producing a modified cell with a targeted sequence modification by introducing 5 into a cell first and second substantially complementary single-stranded targeting polynucleotides and a recombinase, wherein said first single-stranded targeting polynucleotide comprises said first nucleic acid sequence or a homologue thereof, and further comprises a homology clamp substantially corresponding to or substantially complementary to a pre-selected target DNA sequence, and identifying a cell having said targeted sequence 10 modification; and

(iii) producing a transgenic animal with a modified preselected DNA sequence, by introducing into a zygote first and second substantially complementary single-stranded targeting polynucleotides and a recombinase, wherein said first single-stranded targeting polynucleotide comprises said first nucleic acid sequence or a homologue thereof and further 15 comprises a homology clamp substantially corresponding to or substantially complementary to a pre-selected wild-type target DNA sequence, wherein said pre-selected wild-type target DNA sequence is modified by homologous recombination with at least one of said first or second substantially complementary single-stranded targeting polynucleotides, and generating said transgenic non-human mammal from said zygote.

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9. (Currently amended) A method for providing integrated genomics services comprising:

- (a) receiving a first request from a customer comprising a first nucleic acid sequence and an order for at least one first genomic product or service;
- 25 (b) receiving a second request from the same or different customer comprising a second nucleic acid sequence and an order for at least one second genomic product or service, wherein said first request and said second request comprise a website customer

interface that comprises a field for a customer identification number, a field for said first nucleic acid sequence, a field for said second nucleic acid sequence, a field for said at least one first genomic product or service and a field for said at least one second genomic product or service; and

- 5 (c) utilizing said first and said second nucleic acid sequences to provide said at least one first genomic product or service and said at least one second genomic product or service to said customers.

10. (Currently amended) A method for providing an integrated genomic service
10 comprising:

- (a) receiving a first request from a customer comprising a first nucleic acid sequence and an order for at least one genomic product or service, wherein said first request comprises a website customer interface that comprises a field for a customer identification number, a field for said first nucleic acid sequence and a field for said at least one genomic product or service; and
- 15 (b) utilizing said first nucleic acid sequence in a recombinase mediated process to [[for]] provide said at least one genomic product.

11. (Currently amended) A computer program for integrating the provision of
20 genomic services and products by a provider or agent, said program comprising instructions for:

a request receiving module including instructions for:

- (a) receiving a first request from a customer, wherein said request comprises a first nucleic acid sequence and an order for at least two genomics products,

- (b) generating a website customer interface that permits a user to input a customer identification number, to input said nucleic acid sequence, and to input said at least two genomics products, and
- (c) processing said request to provide [[obtain]] said at least two genomics products.

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12. (Currently amended) The computer program according to Claim 11, wherein said processing step further comprises:

- (i) saving said first request in a [[as]] request database,
- 10 (ii) searching databases to determine if said first request or said first nucleic acid is wholly or partially redundant to information within said databases, and
- (iii) updating said first request if any additional information is found in step (ii).

13. (new) The method of Claim 1 wherein said input for said at least one genomics product comprises a pull-down menu and wherein said input for said nucleic acid sequence comprises at least one of a nucleic acid sequence field and a pointer to a nucleic acid sequence.

14. (new) The method of Claim 1 wherein said website customer interface wherein said request comprises an input for said customer identification number, an input for said first nucleic acid sequence and an input for said at least one genomics product.

15. (new) The method of claim 2 wherein said report comprises at least one of a nucleic acid sequence of a cloned gene, a protein sequence expressed by a gene, and results of drug screens against cell lines expressing a cloned gene.

16. (new) The method of claim 3 further comprising querying said customer to proceed with said second request if said second request or nucleic acid sequence is redundant.

17. (new) The method of claim 1 further comprising verifying that the customer is in
5 good standing.

18. (new) The method of claim 1 wherein data is sent or viewed over a public network using encrypted connections or over a private or semi-private secured transmission line.

10 19. (new) The method according to claim 1 further comprising:

(a) receiving said first request from said customer, wherein said request comprises a first nucleic acid sequence and an order for at least two different genomics products; and

(b) utilizing said nucleic acid sequence to provide said at least two different genomics products.

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20. (new) A method for providing integrated genomic services comprising:

(a) receiving a first request from a customer, wherein said request comprises a first nucleic acid sequence and an order for at least two different genomics products, wherein said request is made using a website customer interface that comprises a field for a customer

20 identification number, a field for a nucleic acid sequence and a field for said at least two different genomics products, wherein data comprising said request is sent or viewed over a public network using encrypted connections or over a private or semi-private secured transmission line;

(b) confirming that said customer is in good standing; and

25 (c) utilizing said nucleic acid sequence in a recombinase mediated process to provide said at least two different genomics products.